

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions and listings of the claims in this application.

LISTING OF THE CLAIMS:

1. (Currently Amended) A hermetic compressor having a sealed housing storing therein lubricating oil and receiving therein a motor element and a compression element driven by said motor element, said compression element comprising a shaft having an eccentric shaft portion, and an auxiliary shaft portion and a main shaft portion coaxially provided on upper and lower sides of said eccentric shaft portion so as to sandwich it therebetween, a cylinder block provided with a compression chamber of a substantially cylindrical shape, a main bearing fixed to or formed integral with said cylinder block so as to be substantially perpendicular to an axis of said compression chamber and supporting an upper half portion of said main shaft portion of said shaft, an auxiliary bearing fixed to or formed integral with said cylinder block and supporting said auxiliary shaft portion, a piston that performs reciprocating motion in said compression chamber, and connecting means for coupling said piston and said eccentric shaft together, wherein said shaft is provided with an oil feed mechanism having a lower end communicating with said lubricating oil and an upper end penetratingly open to an upper end portion of said auxiliary shaft portion, and said auxiliary bearing is provided with an oil fence for receiving the lubricating oil spouting out from the upper end portion of said oil feed mechanism and an oil feed passage for conducting the lubricating oil to a sliding surface of said piston, said oil fence including a vertical wall which intersects with an extension of the direction of radially scattering of the lubricating oil due to a centrifugal force from said oil feed mechanism, the shape of said oil fence and the position of said oil fence with respect to said oil feed mechanism being determined so that said radially scattering oil directly collide with said vertical wall, and then the oil is collected.

2. (Original) A hermetic compressor according to claim 1, wherein an oil pool for storing said lubricating oil is concavely formed in said oil feed passage on an upper surface of said auxiliary bearing.

3. (Original) A hermetic compressor according to claim 1, wherein an oil dispersion hole communicating with said oil feed mechanism is formed in a substantially horizontal direction at a portion of said auxiliary shaft portion above an upper surface of said auxiliary bearing.

4. (Previously presented) A hermetic compressor according to claim 1, wherein said oil fence is made to project upward and is provided on an upper surface of said auxiliary bearing in the vicinity of said oil feed passage.

5. (Original) A hermetic compressor according to claim 1, wherein an opening portion is provided, said opening portion communicating with said oil feed passage provided on an upper surface of said auxiliary bearing and being open above an oil feed passage provided at a portion of said cylinder block above said compression chamber.

6. (Original) A hermetic compressor according to claim 5, wherein an oil guide projecting downward is provided in the vicinity of the opening portion on the side of a lower end surface of said auxiliary bearing.

7. (Original) A hermetic compressor according to claim 5, wherein a cylindrical piston pin fixed to said piston and coupling a connecting rod being connecting means and said piston

together is provided, and the opening portion is located right above said piston pin in the vicinity of a bottom dead center of said piston and is larger than a horizontal section of said piston pin.

8. (Original) A hermetic compressor according to claim 1, wherein a cylinder communicating hole having one end communicating with and open to an upper portion in the compression chamber of said cylinder block is provided in said oil feed passage.

9. (Original) A hermetic compressor according to claim 1, wherein a substantially annular oil feed groove communicating with said oil feed passage in the vicinity of a bottom dead center of said piston is concavely formed on an outer periphery of said piston.

10. (Original) A hermetic compressor according to claim 1, wherein an oil bath communicating with sliding surfaces between said auxiliary shaft portion and said auxiliary bearing is formed around said auxiliary shaft portion.

11. (Original) A hermetic compressor according to claim 10, wherein an oil feed hole is formed on said auxiliary shaft portion, said oil feed hole establishing communication between said oil bath and said oil feed mechanism and having a bottom surface located above a bottom surface of said oil bath.

12. (Canceled)

13. (Original) A hermetic compressor according to claim 1, wherein an oil fence projecting upward is provided on a surface of said cylinder block above the compression chamber, and said oil feed passage is formed in the surface of said cylinder block above said compression chamber.

14. (Original) A hermetic compressor according to claim 1, which is inverter-driven at a plurality of operating frequencies including at least an operating frequency lower than a power supply frequency.

15. (Original) A hermetic compressor according to claim 14, wherein said operating frequency lower than said power supply frequency includes at least an operating frequency lower than 30Hz.

16. (Currently Amended) A hermetic compressor having a sealed housing storing therein lubricating oil and receiving therein a motor element and a compression element driven by said motor element, said compression element comprising a shaft having an eccentric shaft portion, and an auxiliary shaft portion and a main shaft portion coaxially provided on upper and lower sides of said eccentric shaft portion so as to sandwich it therebetween, a cylinder block provided with a compression chamber of a substantially cylindrical shape, a main bearing fixed to or formed integral with said cylinder block so as to be substantially perpendicular to an axis of said compression chamber and supporting an upper half portion of said main shaft portion of said shaft, an auxiliary bearing fixed to or formed integral with said cylinder block and supporting said auxiliary shaft portion, a piston that performs reciprocating motion in said compression chamber, and connecting means for coupling said piston and said eccentric shaft together, wherein said shaft is provided with an oil feed mechanism having a lower end communicating with said lubricating oil and an upper end penetratingly open to an upper end portion of said

auxiliary shaft portion, and said cylinder block is provided with an oil fence for receiving the lubricating oil spouting out from the upper end portion of said oil feed mechanism and an oil feed passage for conducting the lubricating oil to a sliding surface of said piston, said oil fence including a vertical wall which intersects with an extension of the direction of radially scattering of the lubricating oil due to a centrifugal force from said oil feed mechanism, the shape of said oil fence and the position of said oil fence with respect to said oil feed mechanism being determined so that said radially scattering oil directly collide with said vertical wall, and then the oil is collected.

17. (Previously presented) A hermetic compressor according to claim 16, wherein an oil dispersion hole communicating with said oil feed mechanism is formed in a substantially horizontal direction at a portion of said auxiliary shaft portion above an upper surface of said auxiliary bearing.